

ABSTRACT

According to the present invention, a thin film made of a wurtzite structure compound is manufactured by a reactive sputtering using a metal material as a target, and a nitrogen gas or an oxygen gas as a reactive gas. By optimizing film-forming conditions when manufacturing the film, it is possible to obtain a wurtzite thin film whose polarization directions of crystal grains are aligned in a uniform direction.

According to a laminate of the present invention, a first wurtzite crystalline layer made of a wurtzite crystalline structure compound is formed in advance between a substrate and a functional material layer that is a ground. Thus, it is possible to improve the crystallinity and crystalline orientation of a second wurtzite crystalline layer formed on the functional material layer.